Traveling Sales Person

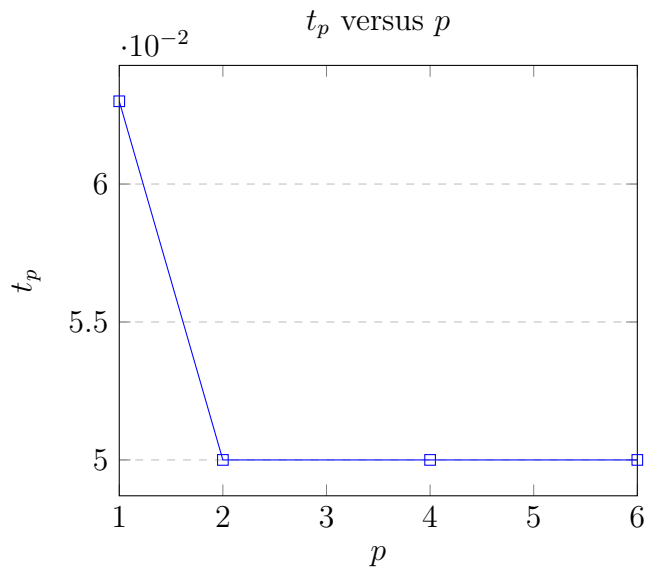Brandon George [*]

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Abstract

Welcome to the Traveling Sales Person Problem! This was my fist attempt at making a GPU program and I think that it has been very beneficial to understanding what GPU programming might look like.
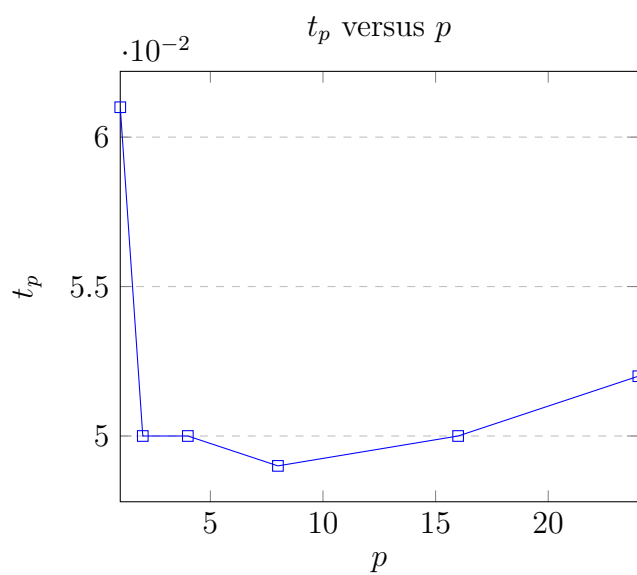
1 Report

1.1 Three Cities

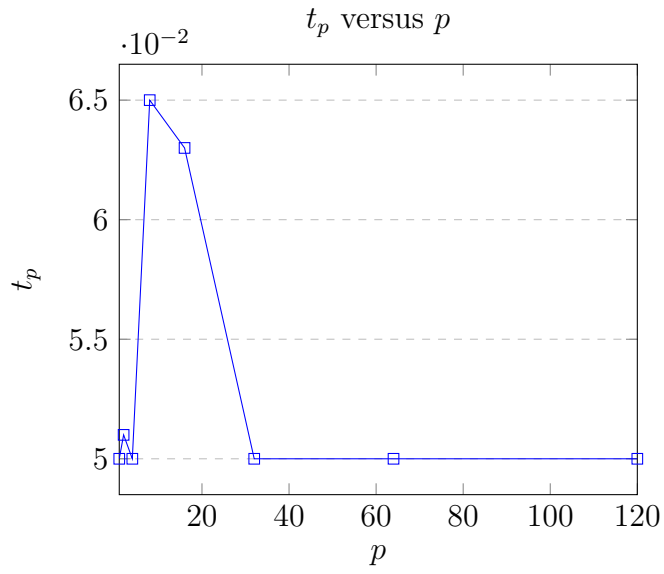| Cities	p	t_p(s)	s	e
3	1	0.063	-	-
	2	0.050	1.26	.63
	4	0.050	1.26	.315
	6	0.050	1.26	.21

t_p versus p

1.2   Four Cities

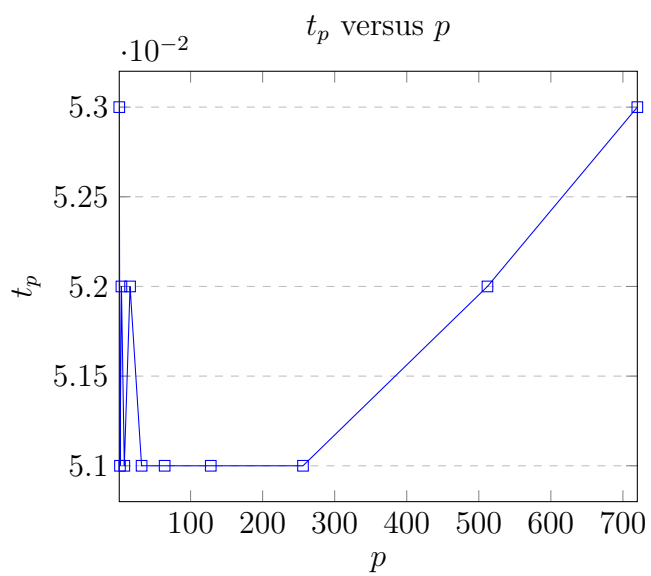| Cities	p	t_p(s)	s	e
4	1	0.061	-	-
	2	0.050	1.22	.62
	4	0.050	1.22	.305
	8	0.049	1.24	.155
	16	0.050	1.22	.076
	24	0.052	1.17	.049

t_p versus p

1.3   Five Cities

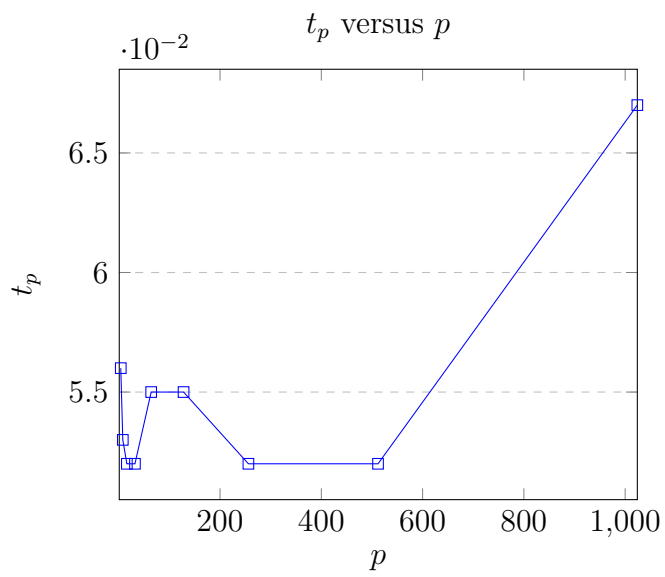| Cities	p	t_p(s)	s	e
5	1	0.050	-	-
	2	0.051	.98	.49
	4	0.050	1	.25
	8	0.065	.76	.095
	16	0.063	.76	.048
	32	0.050	1	.0313
	64	0.050	1	.016
	120	0.050	1	.008

t_p versus p

1.4 Six Cities

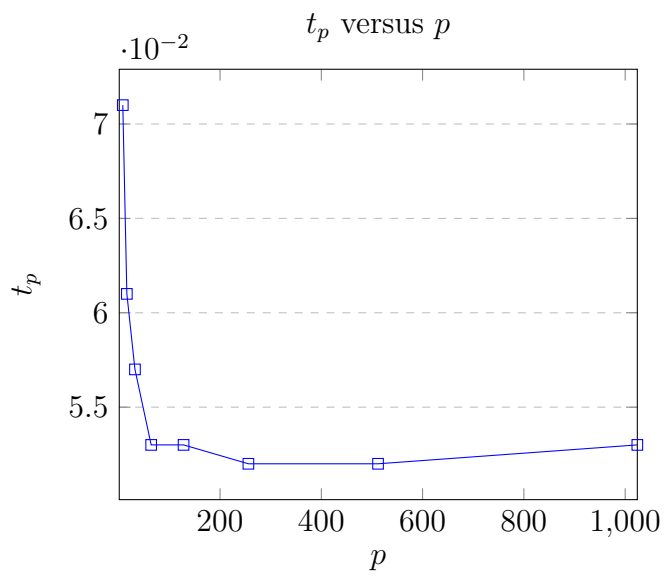| Cities	p	$t_p(\text{s})$	s	e
6	1	0.053	-	-
	2	0.051	1.03	.515
	4	0.052	1.01	.2525
	8	0.051	1.03	.129
	16	0.052	1.01	.063
	32	0.051	1.03	.032
	64	0.051	1.03	.016
	128	0.051	1.03	.008
	256	0.051	1.03	.004
	512	0.052	1.01	.002
	720	0.053	1	.001

t_p versus p

1.5   Seven Cities

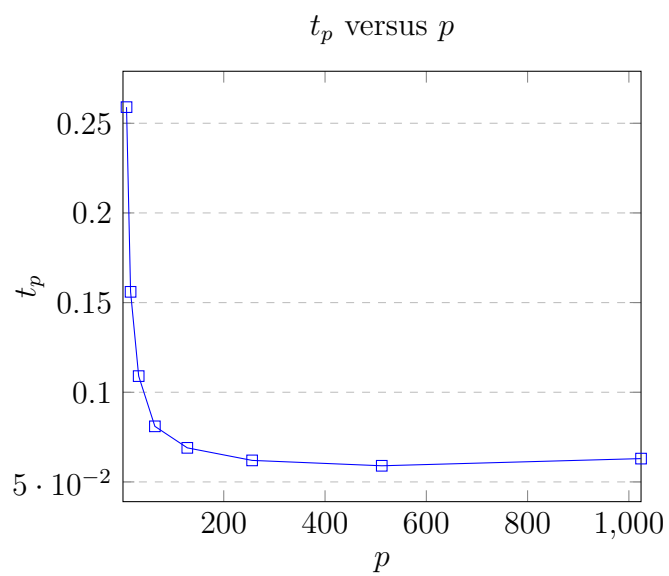| Cities	p	$t_p(\text{s})$
7	4	0.056
	8	0.053
	16	0.052
	32	0.052
	64	0.055
	128	0.055
	256	0.052
	512	0.052
	1024	0.067

t_p versus p

1.6 Eight Cities

Cities	p	$t_p(\mathrm{s})$
8	8	0.071
	16	0.061
	32	0.057
	64	0.053
	128	0.053
	256	0.052
	512	0.052
	1024	0.053

t_p versus p

1.7   Nine Cities

Cities	p	$t_p(\mathrm{s})$
9	8	0.259
	16	0.156
	32	0.109
	64	0.081
	128	0.069
	256	0.062
	512	0.059
	1024	0.063

t_p versus p

1.8   Ten Cities

Cities	p	$t_p(\text{s})$
10	8	2.336
	16	1.240
	32	0.700
	64	0.386
	128	0.225
	256	0.156
	512	0.136
	1024	0.137

t_p versus p